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Critical Care

TOPIC: Critical Care

TYPE: Global Case Reports

ACUTE ENCEPHALOPATHY AFTER SELF MEDICATION WITH IVERMECTIN IN A PATIENT WITH COVID-19

JUAN MORALES BRYAN EMERICK AND ABDULILAH ARAFEH

INTRODUCTION: Ivermectin is an FDA approved anti parasitic drug widely used and generally well tolerated. In vitro data suggests ivermectin may inhibit replication of SARS-CoV-2. This has generated interest for a potential role in the prevention and treatment of COVID19. We report a case of a patient who developed severe encephalopathy after an accidental overdose with ivermectin

CASE PRESENTATION: A 70-year-old female patient was brought to the ED with altered mental status. The patient initially complained of nonproductive cough for five days. After searching online for possible treatments for COVID19, her husband bought a veterinarian preparation of ivermectin for horses at the local store. After discussing with her husband, the patient took two ampules of this medication. Each ampule contained 113.75 mg of ivermectin. About five hours later, the husband noticed that she was difficult to arouse. On presentation, vital signs were normal and she was afebrile. On exam she was arousable to voice and able to follow simple commands but nonverbal. Initial lab values included a normal CBC and BMP. Aminotransferases were mildly elevated. SARS-Cov-2 RNA nasal pharyngeal swab was positive . Urine drug screen was negative . CXR and CT of the brain were normal. The patient was admitted to the ICU for close neurologic assessments. Fortunately, the patient improved slowly and was discharged home 48 hours later with no complications

DISCUSSION: Ivermectin is a known anti parasitic drug, that has not been approved to treat viruses. That being said, ivermectin, in vitro, inhibits positive, single stranded RNA viruses. Ivermectin has also shown to inhibit replication of SARS-CoV-2 in vitro. Several trials have been conducted to assess the efficacy of this drug for the prevention and treatment of COVID19 . Results have been inconclusive. FDA has not approved ivermectin for use in treating or preventing COVID19. Although mostly considered a safe drug, overdose with ivermectin can cause nausea, vomiting, diarrhea, dizziness, ataxia and rarely seizures, coma and even death. Cases of fatal encephalopathy have been described during ivermectin treatment campaigns against onchocerciasis in Africa in subjects with a high Loa loa microfilarial density. Dosing for treatment of parasitic infections are in the range 150- 400 mcg/kg/ day. Our patient took ten times the recommended dose. Ivermectin is also used as an antiparasitic agent for farm animals. It can be purchased without a prescription for veterinarian use. On April 10, 2020 the FDA published an advisory warning the public not to take Ivermectin intended for animals.

CONCLUSIONS: Ivermectin is an anti parasitic drug widely used and generally well tolerated. The efficacy of this drug for the prevention and treatment of COVID19 remains inconclusive and its use is not recommended. Accidental overdoses can present with severe encephalopathy

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